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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,487	10/01/2003	Frank S. Rossi	1153.012US2	7519

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EXAMINER	
WEBB, GREGORY E	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/676,487	ROSSI ET AL.	
	Examiner	Art Unit	
	Gregory E. Webb	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) *18-37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date [redacted] 10/1/2003
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

5/10/06

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 4/10/06 have been fully considered but they are not persuasive. The applicant argues that it would be "likely" that a search for group I would yield results for group II. Although it may be "likely" that such searches would yield the same results, it is equally unlikely that such a search would not yield results for group II. As the examiner does not wish to guess the extent of the overlap, the restriction is maintained.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. It is not clear to the examiner how the adjuvant is being defined in these two claims. In claim 4 the applicant states "the adjuvant comprises" and lists several groups of compounds some separate by semicolons and some separate by the word "and" and the final group separated by the phrase "or." The transitional phrase "comprising" implies that each and every component in the list is actually required by the composition. Thus it is not clear why in the claim the applicant uses the alternative "or." If the applicant intended that only one of these compounds is chosen from the group, it is suggested that the applicant use a proper Markush phrase (the adjuvant is selected from the group consisting of a, b, and c)

4. Similarly claim 5 now states that the composition requires the inclusion of all three compounds listed and that multiple alkanolamines surfactants and sulfates are required as the applicant has used the plural form.

5. Please state in the response to this action how the examiner should interpret claim 4. And if necessary correct claim 5. Pending such a description, the examiner will remove this rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The applicant's claims are directed to a composition containing zinc oxide, water, and an adjuvant. The applicant's intended use will be considered. However, the examiner will search art beyond paint formulations and will consider any coating containing these components as meeting the instant limitations.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Andrean et al (US5205837).

Concerning the zinc oxide, pigment and the paint, Andrean et al teaches the following:

22. The cosmetic composition of claim 17 which also includes a metal oxide nanopigment selected from the group consisting of titanium oxide, zinc oxide, cerium oxide, zirconium oxide and mixtures thereof, said nanopigment having an average
diameter of less than 100 nm and being coated or non-coated.(see claim 22)

Concerning the surfactant and the specific surfactant, Andrean et al teaches the following:

The coated pigments are pigments which have undergone one or more surface treatments of a chemical, electronic, mechanochemical and/or mechanical nature with compounds as described, for example, in COSMETICS and TOILETRIES, February 1990, volume 105, pages 53-64, such as aminoacids, beeswax, fatty acids, fatty alcohols, anionic surfactants, lecithins, the sodium, potassium, zinc, iron or aluminium salts of fatty acids, metal (titanium or aluminium) alkoxides, polyethylene, silicones, proteins (collagen, elastin) alkanolamines, silicon oxides, metal oxides or sodium hexametaphosphate.(see cols. 5-6)

Concerning the propellant, Andrean et al teaches the following:

21. The cosmetic composition of claim 17 which also contains at least one of a fat, an organic solvent, a silicone, a thickener, an emollient, a surfactant, a sun filter, an antifoam agent, a hydrating agent, a perfume, a preservative, antioxidant, a filler, a sequestering agent, a treatment agent, a propellant, an alkalinizing agent, an acidifying agent or another pigment.(see claim 21)

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hansenne et al (US6096294).

Concerning the zinc oxide, pigment and the paint, Hansenne teaches the following:

The cosmetic compositions according to the invention may also contain pigments or, alternatively, nanopigments (average size of the primary particles: generally ranging from 5 nm to 100 nm, preferably from 10 to 50 nm) of coated or uncoated metal oxides such as, for example, nanopigments of titanium dioxide (amorphous or crystallized in rutile and/or anatase form), of iron oxide, of zinc oxide, of zirconium oxide or of cerium oxide, which are all photoprotective agents that are per se well known to this art and which are effective by physical blocking (reflection and/or diffusion) of the UV irradiation. Conventional coating agents include, moreover, alumina and/or aluminum stearate. Such coated or uncoated metal oxide nanopigments are described, in particular, in EP-A-0,518,772 and EP-A-0,518,773.(see col. 5, lines 30-50)

Concerning the adjuvant, surfactant, propellant and the specific surfactant, Hansenne teaches the following:

14. The sunscreen/cosmetic composition as defined by claim 13, said at least one adjuvant or additive comprising a fat, organic solvent, ionic or nonionic thickening agent, softener,

antioxidant, anti-free-radical antioxidant, opacifying agent, stabilizing agent, emollient, silicone, .alpha.-hydroxy acid, anti-foaming agent, hydrating agent, vitamin, fragrance, preservative, surfactant, filler, sequestering agent, polymer, propellant, insect repellent, basifying or acidifying agent, dye, colorant, or mixture thereof.(see claim 14)

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chettiath (US4735995). Concerning the zinc oxide, water, pigment, paint and the paint composition, Chettiath teaches the following:

In utilizing the vinyl modified polyesters, i.e. the acrylic modified polyesters of this invention, in the formulation of paint, it is within the skill of one in the art to utilize other well known components, i.e. pigments, driers and the like, with the paint formulas. More specifically, water may be present in amounts ranging up to about 95 parts by weight, e.g. 5 to 60 parts with the cosolvent ranging from about 1.0 to 15 parts. Typical pigments used in the coating compositions include the metal oxides such as titanium dioxide, iron oxide, zinc oxide, metallic flakes such as aluminum, bronze or nickel flake, metallic powders, metallic hydroxides, malybdate pigments, carbonate pigments, carbon black, silica pigments, and various other organic and/or inorganic pigments commonly used for coatings. These pigments are generally used in combination with the binders at a weight ratio of about 0.1 to 100 parts by weight of the pigment for every 100 parts by weight of the resin or binder which forms the film of the coating. Generally the pigments are dispersed in the resin forming a dispersion which is then added to the coating formulation.(see col. 15, lines 5-30)

Concerning the surfactant, propellant and the specific surfactant, Chettiath teaches the following:

As indicated herein, surfactants may be present in the aqueous coating composition in amounts ranging from about 0 to 10 parts by weight, and preferably in amounts ranging from about 0.1 to 2.0 parts by weight based on the total weight of pigments. These surfactants are well known in the paint art and particularly include such materials as Strodex.RTM. surfactants which are characterized as phosphated coesters of alcohol and aliphatic ethoxylates, the Aerosol.RTM. OT's including the salts of dialkyl sulfosuccinates, the Tamol.RTM. dispersants which are alkali metal and ammonium salts of polymeric carboxylic acid, Triton.RTM. which includes the sodium salts of dialkyl sulfosuccinates, and the nonionic surfactants including the benzyl ether of octophenol ethylene oxide aducts, the nonyl phenoxy ethanol aducts, the octyl phenoxy polyethoxy ethanols, the salts of alkyl aryl polyether sulfonates, the alkyl aryl polyether alcohols, the Igepals.RTM. surfactants including the ethoxylated alkyl phenols, etc.(see cols. 15-16)

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Myers, John L. (US3947286).

Concerning the zinc oxide, Myers, John L. teaches the following:

> The fibers may be totally pigmented with a primary hiding pigment having high efficiency and providing opacity such as rutile titanium dioxide. Anatase titanium dioxide may be used where chalking is desired. Other anionic hiding pigments comprise zinc sulfide, zinc oxide, basic silicate of white lead, lithopane, iron oxide or antimony oxide. Any combination of these hiding pigments may be utilized. In another procedure in accordance

with the invention to be discussed below, the fibers may be pigmented with a mixture of anionic hiding pigments or a mixture of anionic hiding and extender pigments. Typical extender pigments and the amounts in percent by weight in which they may be present are provided below. These extender pigments may be combined as desired for a particular end result.(see col. 5, lines 20-35)

Concerning the paint composition, Myers, John L. teaches the following:

In the first step of making a high quality paint formulation in accordance with the invention, a dispersion of pigments is prepared. The pigment dispersion can contain varying amounts of the pigmented asbestos usually ranging from 1 to 25%, preferably 5 to 10%, of the total solids of the dispersion, depending on the water demand of the various components of the system, the properties desired for the final paint composition and properties desired for the final paint film. The unpigmented high purity chrysotile asbestos fibers have a water demand of about 480% while the pigmented fibers have a lower water demand depending on the quantity and type of pigment.(see cols. 4-5)

Concerning the surfactant, Myers, John L. teaches the following:

A series of paint formulations were prepared by first charging in order, water, thickener, surfactant, fungicide, freeze-thaw additive, coalescing agent, and about one-half of the defoamer, and mixing for 5 minutes at low speed. Thereafter, the TiO.sub.2 was added and dispersed until a desired dispersion was achieved. Mixing speed was increased. The remaining

pigments, including calcium carbonate, clay and the high purity chrysotile asbestos fibers, were then added and mixed at high speed to form a pigment-asbestos fiber dispersion. The latex and remainder of the defoamer were then added to the pigment-asbestos fiber dispersion at low speed. Agitation should be continuous and each ingredient dispersed before the next is added.(see col. 10, lines 25-40)

Concerning the specific surfactant, Myers, John L. teaches the following:

Any of the above latexes may be modified with organic solvent based binders or oils which may be of the drying or non-drying type. These modifiers in turn may be emulsified. Modifiers may comprise from 0 to 70% of the vehicle solids in a given paint in which water is the principle diluent. Suitable modifiers are the oils such as linseed oil, tung oil, safflower oil, tall oil rosins or tall oil esters. Resin modifiers comprise alkyd resins, epoxy resins, vinyl resins, acrylic resins, silicone resins, phenolic resins, ester gums and cellulose resins.(see col. 10, lines 1-10)

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson, Jr. (US5166255).

Concerning the zinc oxide, Anderson teaches the following:

Addition of an acrylic acid and/or polyurethane based thickeners known to the art may also be added to achieve desired properties. The incorporation of metal oxides such as zinc oxide may also improve the humidity resistance of the final film.(see col. 10, lines 35-40)

Concerning the water, surfactant and the specific surfactant, Anderson teaches the following:

Examples of anionic surfactants that can be employed are alcohol sulfates, ether sulfates, linear alkyl benzene sulfonates and specially preferred dialkyl sulfosuccinates. The cation of the salt may be ammonium, sodium, potassium, and other monovalent and/or divalent metals. The surfactant is present in this component at a level of 0.1-2.0% by weight, preferably 0.1-1.0% by weight. This component may also contain a water reducible polyurethane at a level of 0.0-25.0% by weight, preferably 0.0-10.0% by weight. Examples of water reducible polyurethanes are NeoRez R-960, R-966, R-967, R-9637 manufactured by ICI Resins and Spensol L51 and L53 manufactured by NL Industries. Also present in this component is a water miscible solvent such as methyl ethyl ketone, acetone, ethanol, methanol, propanol, butanol, N-methylpyrrolidone, glycols, glycol ethers, glycol acetates, diethylene glycol ethers, diethylene glycol acetates, propylene glycol ethers, propylene glycol acetates, dipropylene glycol ethers, dipropylene glycol acetates, specially preferred are ethylene glycol propyl ether, ethylene glycol butyl ether, ethylene glycol hexyl ether, propylene methyl ether, propylene ethyl ether, propylene propyl ether, propylene butyl ether, propylene hexyl ether, dipropylene methyl ether, dipropylene ethyl ether, dipropylene propyl ether and dipropylene butyl ether at a level of 0-25% by weight, preferably 0-12% by weight. The total water content of this component is 50-99.9% by weight.(see col. 10, lines 1-30)

Concerning the pigment and the paint, Anderson teaches the following:

This invention relates to water borne compositions for use in metallic and nonmetallic base coats in a multicoat system for the automotive market. Typically, a water borne basecoat coating composition for the refinish market are in a kit form. The instant invention is concerned with an acrylic latex coating composition for use in an automotive paint base coat composition. The invention also relates to base coats containing pigments, metallic pigments, organic solvents, and conventional paint additives. The outstanding metal control exhibited by this coating composition is attributed to the rheology control agent, the film shrinkage of the acrylic latex vehicle while drying and a wax. The use of acrylic latex results in a very fast dry time. This coating composition provides a base coat that satisfies current and proposed volatile organic compound regulations. Even with conventional non-metallic pigments, the coating exhibits excellent appearance.(see col. 3, lines 49-65)

Concerning the propellant and the paint composition, Anderson teaches the following:

Additional anionic and nonionic surfactants can be added to the paint composition to increase wetting of the substrate by the coating such as FC-120, FC-430 sold by 3M, Surfynol 104, Surfynol 440 sold by Air Products, Triton X-100 sold by Rohm and Haas, Troysol LAC sold by Troy Chemical Company, Aerosol OT's sold by American Cyanamid including the salts of dialkyl sulfosuccinates and Igepal's sold by GAF including the ethoxylated alkyl phenols.(see col. 10, lines 40-50)

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hahn, Kenneth G. (US6242531).

Concerning the zinc oxide and the pigment, Hahn, Kenneth G. teaches the following:

The manufacture of paint coatings involves the preparation of the polymeric binder, mixing of component materials including the micropolymeric thickener of this invention, and dispersing of pigments. High speed dispersers or dissolvers are typically used in the dispersing step to intersperse the pigments into a liquid phase. The binder and pigment dispersion can be thoroughly and uniformly mixed with raw batch ingredients by homogenizing the binders, pigmentary solids, plasticizers, micropolymeric thickener of this invention, and other components to form a uniform blend. Pigments ordinarily include opacifying pigments, such as titanium dioxide and zinc oxide, as well as tinting pigments such as carbon black, yellow oxides, brown oxides, tan oxides, raw and burnt sienna or umber, chromium oxide green, phthalocyanine green, phthalonitrile blue, ultramarine blue, cadmium pigments, chromium pigments, and the like. Filler pigments such as clay, silica, talc, mica, wollastonite, wood flower and the like can be added as desired.(see col. 7, lines 30-50)

Concerning the water, paint and the paint composition, Hahn, Kenneth G. teaches the following:

In another example of the utility of the miniemulsion terpolymer as paint thickener, a similar paint composition was made, at about 140 KU. Different amounts of water were added to samples of the paint to demonstrate how the unusual rheology would permit reduction with high levels of water, compared with conventional latex paints.(see example 10)

Concerning the surfactant, Hahn, Kenneth G. teaches the following:

A standard good quality flat paint was prepared by standard paint-making methodology, and was compared with one made using the same procedure and components, except that in the second example (Ex.9) the oligomeric pigment dispersant and a significant part of the thickener was replaced by the miniemulsion terpolymer. In a typical process, water, dispersants, thickeners, surfactants, defoamers and additives are charged to a high-speed dispersion mixer. Enough water is used to provide a viscosity which will give adequate shear to disperse the pigments. Pigments are added with good mixing and exposed to high shear for several minutes until a good dispersion is achieved. Following this, latex binder, thickeners, defoamers and coalescing solvent are added, along with enough water to achieve the desired paint viscosity for proper application. The paints in this Example 8, in accordance with this invention, contain the following materials:(see example 8)

Concerning the specific surfactant, Hahn, Kenneth G. teaches the following:

An aqueous miniemulsion copolymer useful as a polymeric thickener was produced by the following process generally. The monomers are blended and emulsified into water with the aid of anionic surfactants such as the sulfates and the sulfosuccinates. A very useful surfactant is a medium chain alcohol such as n-hexanol used with Na dioctylsulfosuccinate. Emulsification is done under high shear, such as in an emulsifier (Ross or IKA emulsifiers) or with ultrasound (Sonolator). Particle sizes of less

than one micron are typically generated during high shear micro emulsification. Polymerization of the emulsified monomers can be initiated with persulfates, peroxides, and other common free radical initiators at temperatures of about 20 to 1 OOC with aqueous miniemulsion at concentrations of up to about 50% by weight. After polymerization the emulsions are diluted and neutralized to provide thickening and water solubility. Brookfield viscosities at 100% neutralization with NH3 range up to 1,000 cps or higher at 2% solids. Neutralized products can be used as emulsifier thickeners for various products, and are especially useful for latex paints.(see cols. 7-8)

Allowable Subject Matter

6. Claim 5 is allowed. The prior art fails to teach a composition which contains zinc oxide, water, multiple alkanolamines surfactants, multiple polyethoxyethanol sulfates, and 1,2-propanediol. Noting that claim 5 requires the inclusion of each and every one of these compounds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 571-272-1325. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglass McGinty can be reached on (571)272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory E. Webb
Primary Examiner
Art Unit 1751

gew